

ABSTRACT

Novel orthoesters are provided which can be used as a 2'-hydroxyl protecting groups or 2'-modification in the synthesis of polymers containing ribonucleic acid (RNA) nucleotides. The RNA comprising the orthoester can be handled and analyzed while 2'-modified, thereby minimizing potential degradation. The orthoester is stable during oligonucleotide synthesis. The orthoester is subsequently modified and can then be removed under mild acidic conditions. The ease and dependability of this process and the quality of the RNA product synthesized with this invention are comparable to that previously associated only with DNA synthesis.